

Learning search decisions

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Learning Search Decisions

Levente Kocsis

11 december 2003

1. The task of an evaluation function (i.e., the assignment of a value to a position) as employed in tournament programs belongs to class-S search decisions.
(see subsection 1.2.1 of this thesis)
2. The history heuristic is a form of on-line, on-policy reinforcement learning.
3. The assumptions underlying the TS-FPV and the RL-FPF algorithms are isomorphic.
(cf. subsection 4.2.1 and subsection 4.3.1 of this thesis)
4. The Meta-Actor-Critic algorithm is suitable for learning any search decision with a continuous representation.
(see subsection 5.2.2 and section 6.4 of this thesis)
5. Provided that minimax scores are reliable, score difference is a better measure (for class-S search decisions) than self-play.
(see subsection 4.4.4 of this thesis)
6. The faster a search decision is evaluated, the easier it is to learn.
7. Chess endgames are a collection of different types of games, each type requiring a different strategy. Therefore, it is not possible to establish generic rules that apply to all endgames.
(cf. Dekker, S.T., Herik, H.J. van den, and Herschberg, I.S., Perfect Knowledge Revisited, *Artificial Intelligence*, Vol. 43, pp. 111-123, 1990.)
8. Assume that a human chess player and a chess program have equal playing strength. The difficulty of distinguishing between a game played by the human being and a game played by the computer program increases with their playing strength.
9. Most of the chess games are won by making slightly better moves than the opponent.
10. The data-set-selection problem is linear in the number of data sets.
(see LaLoudouana, D. and Tarare, M. B., Data Set Selection, *Journal of Machine Learning Gossip*, Vol. 1, pp. 11-19, 2003.)
11. The popularity of writers who oppose(d) the communist regimes is a monotonically increasing function of the number of communist countries.